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10/700,908

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Stefan Raspl

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EXAMINER

CHEN, TE Y

ART UNIT

PAPER NUMBER

2161

NOTIFICATION DATE

DELIVERY MODE

09/19/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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|                              |                                      |                                      |  |
|------------------------------|--------------------------------------|--------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/700,908 | <b>Applicant(s)</b><br>RASPL, STEFAN |  |
|                              | <b>Examiner</b><br>SUSAN Y. CHEN     | <b>Art Unit</b><br>2161              |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 August 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,4,5,7-10 and 12-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 4-5, 7-10 and 12-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

***Response to Amendment***

***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on Aug. 28, 2008 has been entered.

This office action is in response to the amendment filed on 08/01/2008.

Claims 1, 4-5, 7-10 and 12-14 are pending for examination, claim 1 has been amended. Claims 2-3, 6, 11 and 15-26 have been canceled.

***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422

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F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 5, 7 of U.S. Patent No. 6,003,029 and claims 1, 6 of U.S. Patent No. 6,829,561. Although the conflicting claims are not identical, they are not patentably distinct from each other because:

Claim 1 of the present application merely repeats the features of claims 1, 5, 7 of U.S. Patent No. 6,003,029 and claims 1 & 6 of U.S. Patent No. 6,829,561 with few conventional details. However, it is obvious for an ordinary skilled person in the art at the time the invention was made to modify the broader claims of U.S. Patent No. 6,003,029 and U.S. Patent No. 6, 829,561 with common details for the purpose to clarify the limitations of his/hers invention.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made

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to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 4-5, 7-10 and 12-14, are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,012,058 issued to Fayyad et al. (hereinafter referred as FAYYAD), in view of U.S. Patent No. 6,636,862 issued to Lundahl et al. (hereinafter referred as Lundahl).

Claim 1:

FAYYAD discloses a method of clustering a set of records, each of the records having attribute values for a set of attributes [e.g., Abstract], the method comprising:

performing a first pass across the set of records, the first pass including:

for each attribute of the set of attributes, determining a characteristic value for said each attribute, the characteristic value being one of a mean value and a median value of the attribute values of said attribute across the records [e.g., col. 3, lines 4-14, the use of K-mean Euclidean distance technique at col. 6, lines 27-63, Fig. 4 and associated texts];

performing a second pass across the set of records, the second pass including:

for each attribute value, determining a deviation from the characteristic value of said each attribute [e.g., col. 3, lines 27-36, col. 4, lines 42 – col. 5, lines 56, Fig. 4, 7 and associated texts];

for each record, sorting the set of attributes based on deviation of the attribute values from the characteristic value of said each attribute, to provide a key, the

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key comprising an ordered list of the set of attributes and the deviations from the characteristic value of said each attribute, the key thereby showing which attributes in the set of attributes deviate the most from the characteristic value [e.g., the sorting of Max. covariance matrix by weight values via Cluster ID (or key) processing at 300, 312, 316, 320, 340, etc. Fig. 11, col. 9, lines 20-56, the use of MergeCS ( ) & RemoveCS (CSCandidateRemoveList, CsCandidates) at col. 21, Appendix C];

combining the set of records based on the key into a clustering results that includes a plurality of clusters [e.g., col. 9, lines 20 – 55];

FAYYAD did not specifically disclose the details of refining the clustering result by: identifying a cluster having a smallest number of records; for each record of the identified cluster, searching another cluster having records with best matching keys; and distributing the cluster with the smallest number of records to the other cluster having records with best matching keys, to reduce the total number of clusters.

However, Lundahl gives the details the claimed cluster refining features, comprising: identifying a cluster having a smallest number of records [e.g., col. 16, lines 36 – col. 17, lines 4]; for each record of the identified cluster, searching another cluster having records with best matching keys [e.g., col. 15, lines 1-26]; and distributing the cluster with the smallest number of records to the other cluster having records with best matching keys, to reduce the total number of clusters [e.g., col. 15, lines 44-59, col. 22, lines 1-32].

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Claims 4:

except the limitations recited in claim 1, the combined invention of FAYYAD and Lundah further discloses determining the deviation comprises calculating a difference between each said attribute value and the characteristic value of each said attribute [e.g., FAYYAD: col. 11, lines 34-56].

Claim 5:

except the limitations recited in claim 1, the combined invention of FAYYAD and Lundah further discloses determining the deviation comprises calculating a difference between said each said attribute value and the characteristic value of the corresponding attribute, and dividing the difference by the characteristic value of said each said attribute [e.g., FAYYAD: col. 11, lines 48-56].

Claim 7:

except the limitations recited in claim 1, the combined invention of FAYYAD and Lundah further discloses that a first record of the set of records contains a first key and a second record of the set of records contains a second key; and further comprising placing the first key and the second key into a single cluster if the first key and the second key have identical sub-sequences of a first length [e.g., Abstract, lines 1-7, Lundah: Fig. 5 and associated texts].

Claim 8:

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except the limitations recited in claim 1, the combined invention of FAYYAD and Laundahl further discloses that first record of the set of records contains a first key and a second record of the set of records contains a second key; and further comprising placing the first key and the second key into a single cluster if the first key and the second key have identical sub-sequences of absolute values of the deviations [e.g., Lundah: col. 20, lines 6 -58].

Claim 9:

except the limitations recited in claim 1, the combined invention of FAYYAD and Laundahl further discloses that a first record of the set of records contains a first key that has a first sub-sequence, and a second record has a second sub-sequence contains a second key; and further comprising placing the first key and the second key into a single cluster if the first and second sub-sequences comprise the same set of attributes [e.g., Abstract, lines 1-7].

Claim 10:

except the limitations recited in claim 9, the combined invention of FAYYAD and Laundahl further discloses that the first and second sub-sequences comprise the same set of attributes irrespective of a sign of the deviations of the attribute values [e.g., Lundah: col. 20, lines 6 -58, Note the absolute value of an attribute is irrespective of a sing].



Claim 12:

except the limitations recited in claim 9, the combined invention of FAYYAD and Laundahl further discloses reducing a length of the first sub-sequence and a length of the second sub-sequence in order to find a best match [e.g., Lundah: col. 15, lines 44-59].

Claim 13:

except the limitations recited in claim 11, the combined invention of FAYYAD and Laundahl further discloses using a distance measure to find another cluster for a record of the identified cluster [e.g., the K-mean technique at FAYYAD: Abstract, lines 9-16].

Claim 14:

except the limitations recited in claim 11, the combined invention of FAYYAD and Laundahl further discloses the distance measure comprises a Euclidean distance [e.g., FAYYAD: col. 6, lines 35-47; ].

***Response to Arguments***

Applicant's arguments filed on Aug. 01, 2008 have been fully considered but they are not persuasive.

The examiner disagrees with applicant's piece-meal interpretations and arguments based on newly amended claim limitations that Fayyad does not use a key as described in claim 1.

In reply to these arguments, the examiner directs applicant's attention to Fig. 11 of Fayyad, wherein Fayyad clearly disclosed the claimed limitations -- sorting of a Max. Covariance matrix by weight from largest to smallest values via Cluster ID (or key) as shown with the units 300, 312, 316, 320, 340, etc. Fig. 11 and associated texts.

Furthermore, In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the deviations are determined with respect to the characteristic value which is static for a given attribute and a given set of records) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Based on the discussion above, because applicant does not clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. Further, they do not show how the amendments avoid such references or objections.

For the above reasons, it is believed that the rejections should be sustained.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Minor et al. (U.S. Patent Pub. No. 2004/0019466) which disclosed a microarray performance management system to evaluate profiles.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SUSAN Y. CHEN whose telephone number is (571)272-4016. The examiner can normally be reached on Monday - Friday from 7:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mofiz Apu can be reached on 571-272-4080. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Susan Y Chen/  
Partial Sig. Examiner  
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September 12, 2008